

WHAT IS CLAIMED IS:

1. A layered presentation system, comprising:

a shared display; and

5 a server configured to receive image data in a compressed domain form from each of a plurality of external sources each of which is in communication with the server;

wherein the server is further configured to

10 compute a composite image in the compressed domain based on the compressed domain image data received from multiple external sources by performing one or more of the following operations:

blending select received image data, and

overlying select received image data,

decode the composite image, and

render the composite image on the shared display; and

15 wherein all data exchange between the server and the external sources is in the compressed domain.

2. A layered presentation system, comprising:

a shared display; and

20 a server configured to receive data in a compressed domain form from each of a plurality of clients, one of which is a master client and each of which is in communication with the server;

wherein the server is further configured to

compute a composite image in the compressed domain based on multiple sets of compressed domain data received from multiple clients,

25 decode the composite image, and

render the composite image on the shared display; and

wherein all data exchange between the server and the clients is in the compressed domain.

3. A layered presentation system as recited in claim 2, wherein one of the multiple sets of compressed domain data received by the server and used to
5 compute the composite image represents a master image received from the master client and each of the other sets of compressed domain data received by the server and used to compute the composite image represent secondary imagery received from one or more of the other clients.

4. A layered presentation system as recited in claim 3, wherein the server is
10 configured to compute the composite image by

scaling the master image as required,

scaling any secondary imagery as required, and

determining how and where to incorporate each secondary imagery onto the master image and so incorporating each secondary imagery onto the master image.

15 5. A layered presentation system as recited in claim 4, wherein the server is configured to incorporate each secondary imagery onto the master image by α blending the master image and that secondary imagery and determining proper placement of that secondary imagery with respect to the master image.

6. A layered presentation system as recited in claim 5, where the α blending
20 and the placement operation are combined.

7. A layered presentation system as recited in claim 6, wherein the α blending and the placement operation for a particular secondary imagery is specified by the client from which that secondary imagery originated.

8. A layered presentation system as recited in claim 3, wherein the server is
25 configured to store the master image and each secondary imagery received in compressed domain form, but does not store the composite image.

9. A layered presentation system as recited in claim 2, wherein the server is configured to compute the composite image on-the-fly in the compressed domain.

10. A layered presentation system as recited in claim 2, wherein each of the master image and each secondary imagery received by the server has a unique
5 identification comprising

a session identification identifying a particular presentation session during which it is received,

a client identification identifying the particular client from which it originated, and

10 an image identification.

11. A layered presentation system as recited in claim 9, wherein the unique identification is used to co-identify multiple packets of data containing parts of the same master image or secondary imagery.

12. A layered presentation system as recited in claim 2, wherein the shared
15 display and the server are embodied in a single display-capable device.

13. A layered presentation system as recited in claim 12, wherein the single display-capable device comprises an LCD projector.

14. A layered presentation system, comprising:

a shared display;

20 a plurality of clients, each of which comprises a display; and

a server configured to receive data in a compressed domain form from each of the plurality of clients;

wherein the server is further configured to

compute a composite image in the compressed domain based on
25 multiple sets of compressed domain data received from multiple clients,

decode the composite image, and

render the composite image on the shared display;

wherein each client is configured to request that the server send that client a copy of a current display scaled to match that client's display, the current display being a rendering of a master image or a computed composite image, the server being further configured to scale the copy of the current display in accordance with the request; and

wherein all data exchange between the server and the clients is in the compressed domain.

15. A layered presentation system as recited in claim 14, wherein one of the plurality of clients is a master client, one of the multiple sets of compressed domain data received by the server and used to compute the composite image represents the master image received from the master client, and each of the other sets of compressed domain data received by the server and used to compute the composite image represent secondary imagery received from one or more of the other clients.

16. A layered presentation system as recited in claim 15, wherein each client includes at least one input device with which to generate the secondary imagery transmitted to the server, the secondary imagery being generated during a presentation as annotation to the current display, the at least one input device comprising one or more of a pen, a mouse, and a brush.

17. A layered presentation system as recited in claim 16, wherein at least one of the client displays comprises a touch-screen on which pen, mouse or brush strokes can be made.

18. A method of maintaining and processing image data received from multiple sources to form a composite image comprised of image data from each of the multiple sources, the method comprising the steps of:

receiving a master image;

scaling the master image, if necessary, to fit a target display;

receiving secondary imagery;

scaling received secondary imagery, if necessary; and

performing a blending operation between the master image and each received
5 secondary image;

wherein all images received are in a compressed domain form, and wherein
all scaling and blending are done in the compressed domain.

19. A method as recited in claim 18, wherein the blending operation performing
step comprises determining how and where to incorporate each secondary imagery
10 onto the master image and so incorporating each secondary imagery onto the
master image.

20. A method as recited in claim 18, wherein the blending operation performing
step comprises α blending the master image and each secondary imagery and
determining proper placement of that secondary imagery with respect to the master
15 image.

21. A method as recited in claim 20, wherein the α blending and the placement
are combined.

22. A machine-readable medium embodying a program of instructions for
directing a machine to maintain and process image data received from multiple
20 sources to form a composite image comprised of image data from each of the
multiple sources, the program of instructions comprising:

instructions for scaling a received master image, if necessary, to fit a target
display;

instructions for scaling received secondary imagery, if necessary; and

25 instructions for performing a blending operation between the master image
and each received secondary image;

wherein all images received are in a compressed domain form, and wherein all scaling and blending are done in the compressed domain.

23. A machine-readable medium as recited in claim 22, wherein the blending operation performing instructions comprises instructions for determining how and where to incorporate each secondary imagery onto the master image and so incorporating each secondary imagery onto the master image.

24. A machine-readable medium as recited in claim 22, wherein the blending operation performing instructions comprises instructions for α blending the master image and each secondary imagery and determining proper placement of that secondary imagery with respect to the master image.

25. A machine-readable medium as recited in claim 24, wherein the α blending and the placement are combined.